

# Work Order ID 51981

September 11, 2009 9:50:49 AM



Page 1

Item ID: D3822-2KGY

Accept



Setup Start



Revision ID: C

Item Name: Vertical Tunnel, RH-Grey

Stop



Start Date: 09/11/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 09/21/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

*PL*

Date:

*09-9-11*

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

100

0.00



HandThermo

Memo

0.00

Hand Finishing Thermoforming

1-Cut Sheet to required Blank size

M11807  
BD 09/15/09  
X2

110

0.00



Thermoform

Memo

0.00

Thermoforming Machine

1-Machine Set-Up  
2-Pre-heat Tool to required temp.  
3-Thermoform as per Dwg and Folio #FTA026 using tool DT9074  
Dwg Rev: C  
Folio Rev: A

BD 09/15/09  
X2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**Work Order ID 51981**

September 11, 2009 9:50:49 AM

Page 2

Item ID: D3822-2KGY

Accept

Revision ID: C

Item Name: Vertical Tunnel, RH-Grey

Setup Start

Stop

Start Date: 09/11/2009 Start Qty: 1.00

Required Date: 09/21/2009 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

120

QC2- Inspect parts off machine FAI/FAIB

0.00

QC

Memo

0.00

Quality Control

Visually inspect part for proper formation and texture

BB 09/16/09  
X2

130

QC8- Inspect parts - second check

0.00

QC

Memo

0.00

Quality Control

WH 09/16/09  
X2

140

0.00

HandThermo

Memo

0.00

Hand Finishing Thermoforming

1-Trim to finished dimensions as per Dwg

BB 09/16/09  
X2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

**Work Order ID 51981**

September 11, 2009 9:50:49 AM



Page 3

Item ID: D3822-2KGY

Accept



Setup Start



Revision ID: C

Stop



Item Name: Vertical Tunnel, RH-Grey

Start Date: 09/11/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 09/21/2009 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

150

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

Complete FAI document

B09/16/09  
(X2)

160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

2) 80109/06

(X2)

f

170

Identify as per dwg &amp; Stock Location: \_\_\_\_\_

0.00



Packaging

Memo

0.00

Packaging

09/15/09 (2)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

• **NOTE:** Date & initial all entries

**Work Order ID 51981**

September 11, 2009 9:50:49 AM



Page 4

Item ID: D3822-2KGY

Accept



Setup Start



Revision ID: C

Stop



Item Name: Vertical Tunnel, RH-Grey

Start Date: 09/11/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 09/21/2009 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursDraw  
NumberDraw  
Rev.Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/09/28 *[Signature]*  
09-9-28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng.	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

September 11, 2009 9:50:49 AM

Page 1

Work Order ID: 51981



Parent Item: D3822-2KGYRevC



Parent Item Name: Vertical Tunnel, RH-Grey

Start Date: 09/11/2009

Required Date: 09/21/2009

Comments:

Start Qty: 1.00

Required Qty: 1.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
MKYD6185S.080-P3- 52068		Purchased	No			100	sf	907.6732	7.8039			



Kydex steel grey

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

MAT

111807

907.6732

907.6732

M11807

BB 09/16/09  
X2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order: 51981
Description: Vertical Tunnel, RH		Part Number: D3822-2KIV/KGY
Inspection Dwg: D3822 Rev: C		Page 1 of 1

UNC  
SUBJECT TO  
WORK ORDER  
NO. 51981

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

#### THERMOFORMING SECTION

Description	Accept	Reject	Method of Inspection	Comments
Inside Radii less than "	✓			
Shape Definition	✓			
Texture Retention	✓			
Material imperfections such as bumps, cracks, voids, scratching	✓			

Measured by: JB

Date: 09/16/09

#### TRIMMING SECTION

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
0.8	Min	.895	✓			
0.3	Min	.34	✓			
0.55	Min	.662	✓			
0.040	Min	.052	✓			
0.050	Min	.069	✓			

Measured by: JB

Date: 09/16/09

Audited by: JB

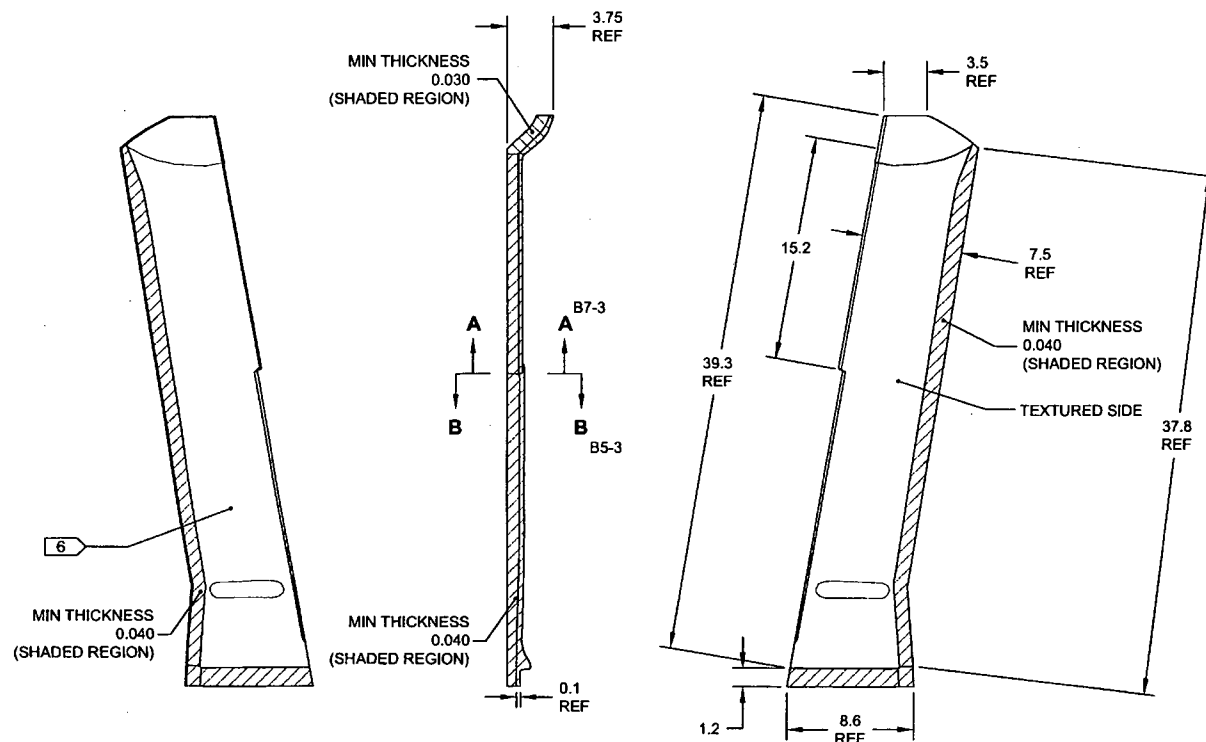
Date: 09/16/09

Prototype Approval: N/A

Date: N/A

Rev	Date	Change	Revised by	Approved
A	09.07.29	New Issue	KJ	

RELEASE  
09/03/22 MP

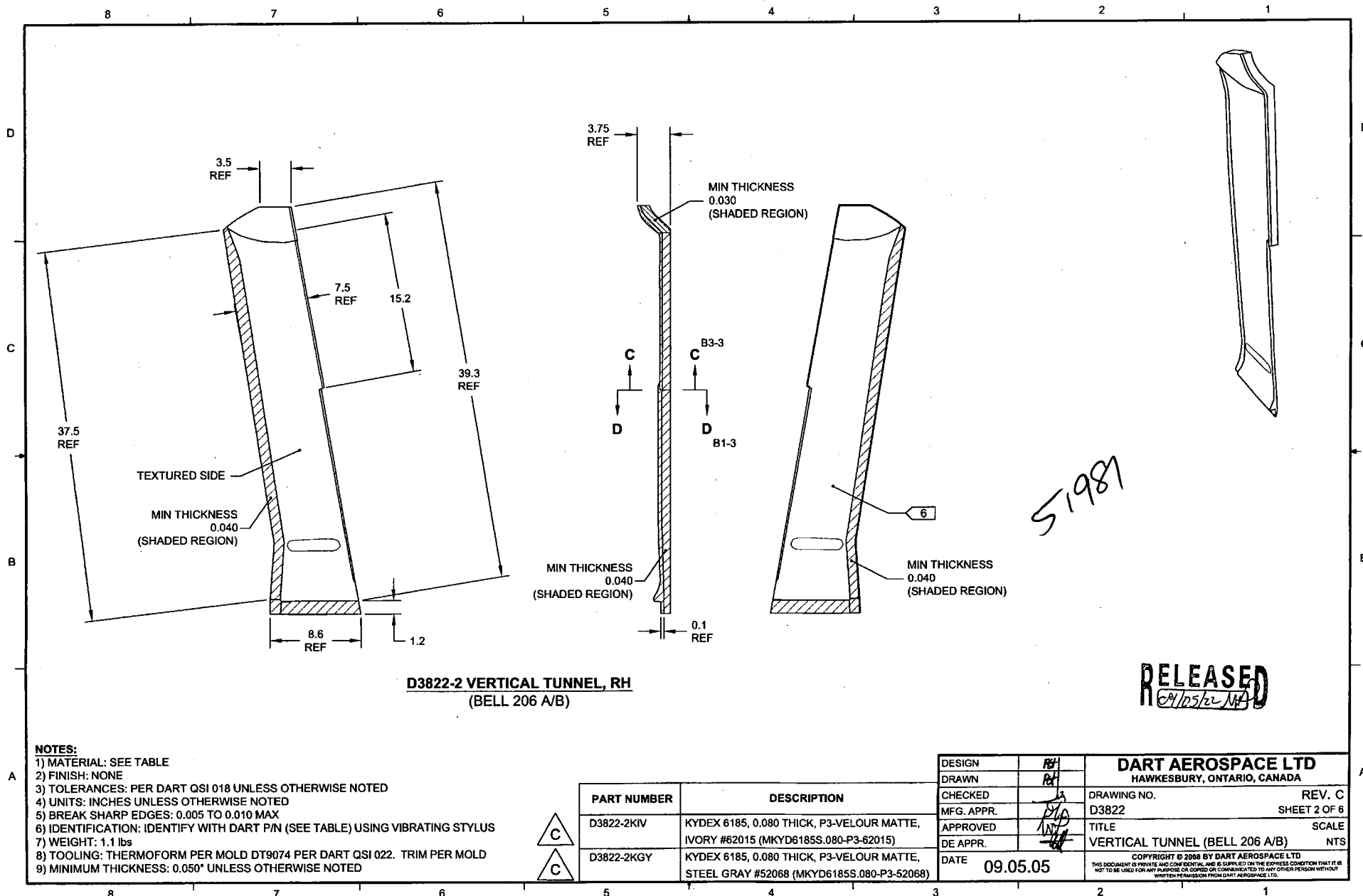


**NOTES:**

- 1) MATERIAL: SEE TABLE
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N (SEE TABLE) USING VIBRATING STYLUS
- 7) WEIGHT: 1.1 lbs
- 8) TOOLING: THERMOFORM PER MOLD DT9073 PER DART QSI 022. TRIM PER MOLD.
- 9) MINIMUM THICKNESS: 0.050" UNLESS OTHERWISE NOTED

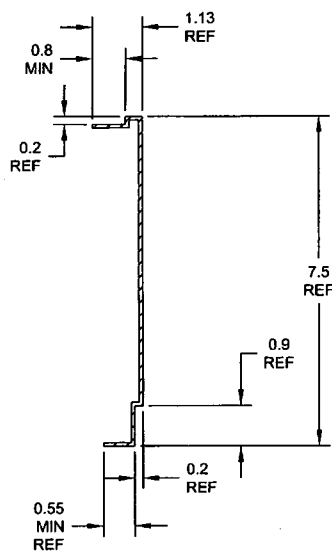
PART NUMBER	DESCRIPTION
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D3822-1KGY	KYDEX 6185, 0.080 THICK, P3-VELOUR MATTE, STEEL GRAY #52068 (MKYD6185S.080-P3-52068)

C	ADD STEEL GRAY COLOUR OPTION, ADD IVORY P/N'S D3822-11-21-31-51-7(KIV) AND ADD STEEL GRAY P/N'S D3822-11-21-31-51-7(KGY) (ZN A5-1, A5-2, A5-4, A5-5, A5-6)	PH	09.05.05
B	37.8 WAS 38.8 (ZN C8-4); MODIFY TOP OF -3 AND ADD VIEW J (ZN A-4); INCREASE JOGGLE (ZN C6-4); UPDATE VIEW F (ZN A1-4); REASON: TO IMPROVE FIT OF D206-781-151 KIT	PH	09.02.09
A	NEW ISSUE	PH	08.09.24
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>PH</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA  DRAWING NO. <b>D3822</b> SHEET 1 OF 1 TITLE <b>VERTICAL TUNNEL (BELL 206 A/B)</b> DATE <b>09.05.05</b>	
DRAWN	<i>PH</i>		
CHECKED			
MFG. APPR.	<i>PH</i>		
APPROVED	<i>PH</i>		
DE APPR.	<i>PH</i>	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT MUST NOT BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	

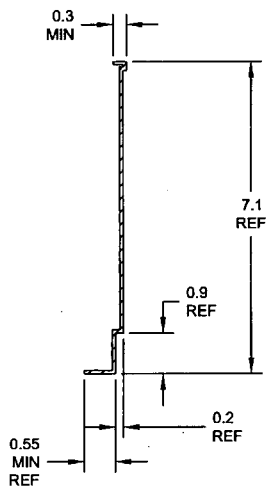


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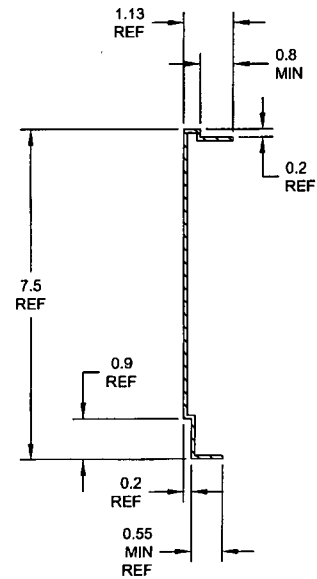
D  
C  
B  
A



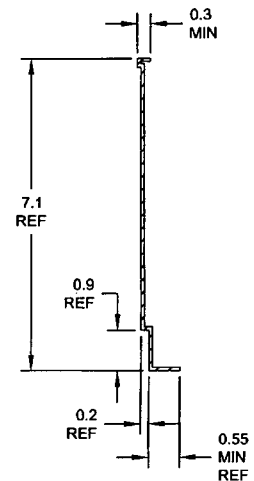
**SECTION A-A** C6-1



**SECTION B-B** C6-1



**SECTION C-C** C4-2



**SECTION D-D** C4-2

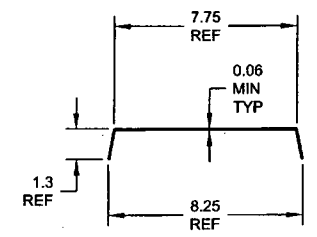
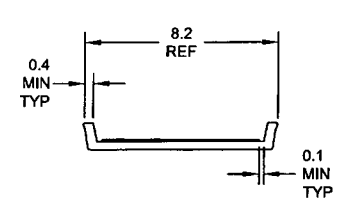
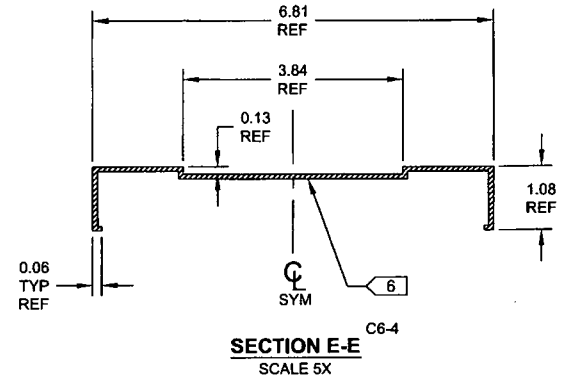
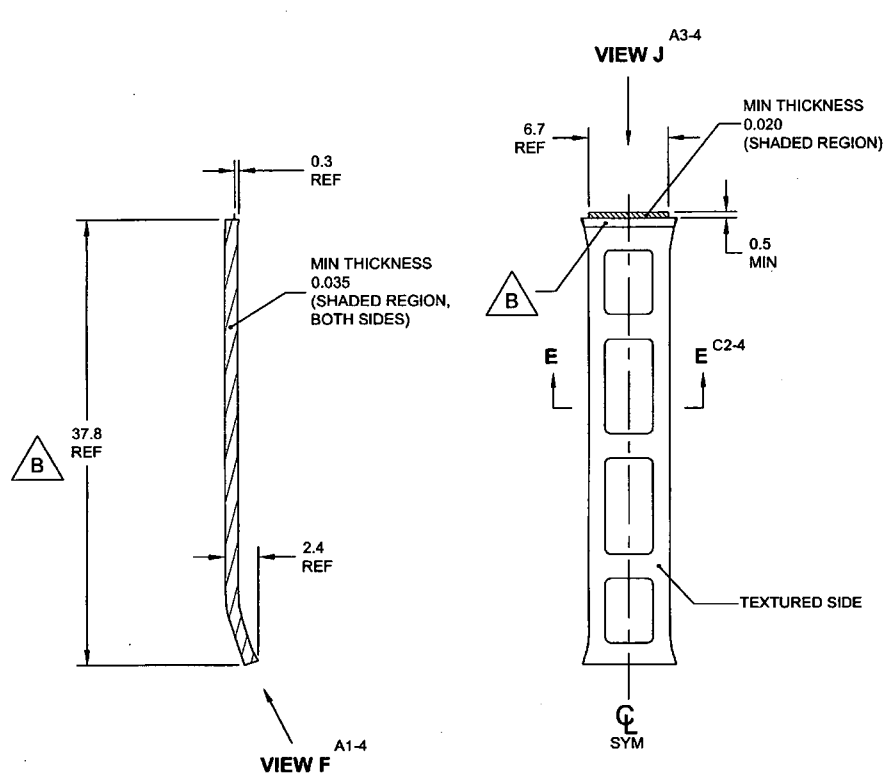
51981

**RELEASED**  
09/05/2005

DESIGN		<b>DART AEROSPACE LTD</b>	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. C
MFG. APPR.		D3822	SHEET 3 OF 6
APPROVED		TITLE	SCALE
DE APPR.		VERTICAL TUNNEL (BELL 206 A/B)	NTS
DATE	09.05.05	<small>COPYRIGHT © 2005 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1



**D3822-3 VERTICAL TUNNEL, AFT CENTER**  
(BELL 206 A/B)

**VIEW J**  
SCALE 2X

**RELEASED**  
09/05/22 MP

**VIEW F**  
SCALE 2X  
(ROTATED 90° CW)

**NOTES:**

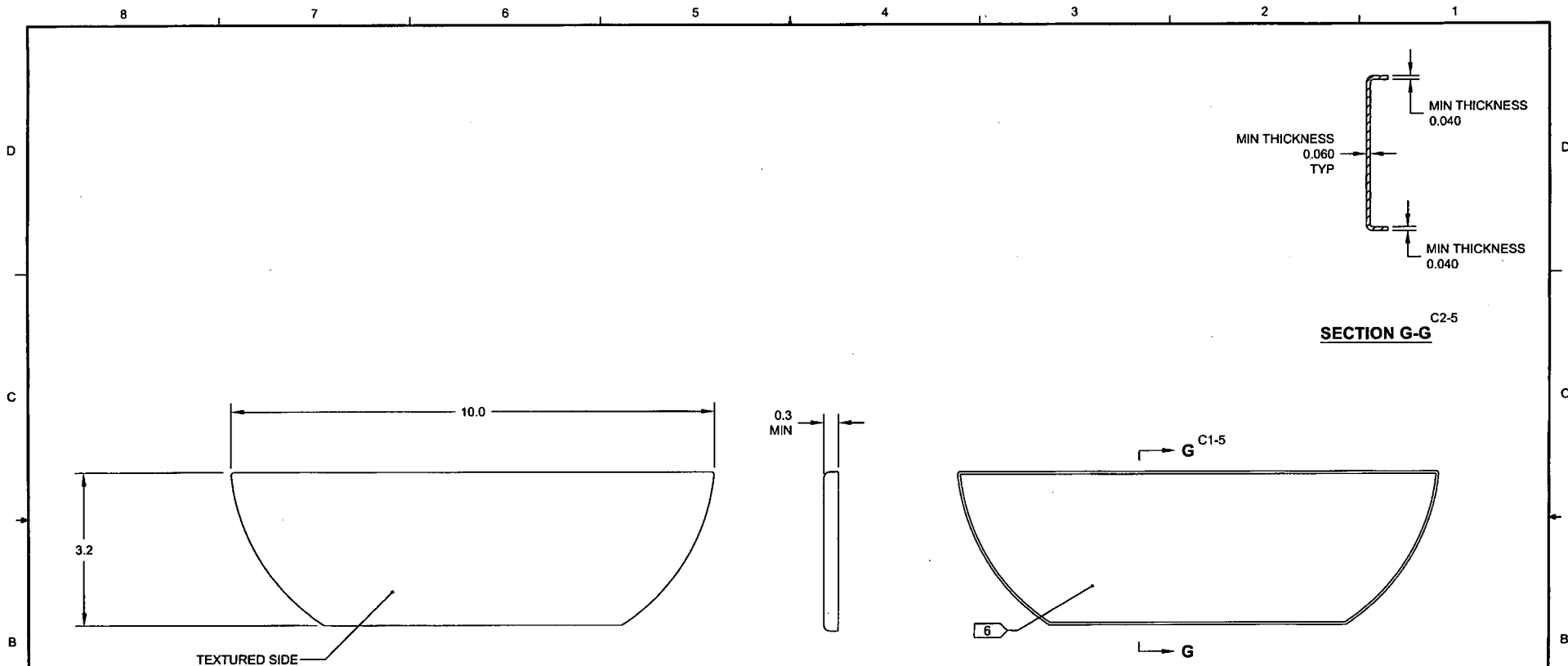
- 1) MATERIAL: SEE TABLE
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N (SEE TABLE) USING VIBRATING STYLUS
- 7) WEIGHT: 1.1 lbs
- 8) TOOLING: THERMOFORM PER MOLD DT9072 PER DART QSI 022. TRIM PER MOLD
- 9) MINIMUM THICKNESS: 0.050" UNLESS OTHERWISE NOTED

**C**  
**C**

PART NUMBER	DESCRIPTION
D3822-3KIV	KYDEX 6185, 0.080 THICK, P3-VELOUR MATTE, IVORY #62015 (MKYD6185S.080-P3-62015)
D3822-3KGY	KYDEX 6185, 0.080 THICK, P3-VELOUR MATTE, STEEL GRAY #52068 (MKYD6185S.080-P3-52068)

DESIGN	RE	<b>DART AEROSPACE LTD</b>
DRAWN	RE	HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. REV. C
MFG. APPR.		D3822 SHEET 4 OF 6
APPROVED		TITLE SCALE
DE APPR.		VERTICAL TUNNEL (BELL 206 A/B) NTS
DATE	09.05.05	COPYRIGHT © 2008 BY DART AEROSPACE LTD
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8 7 6 5 4 3 2 1



**D3822-5 VERTICAL TUNNEL, TOP**  
(BELL 206 A/B)

51981  
**RELEASED**  
9/10/02 MP

**NOTES:**

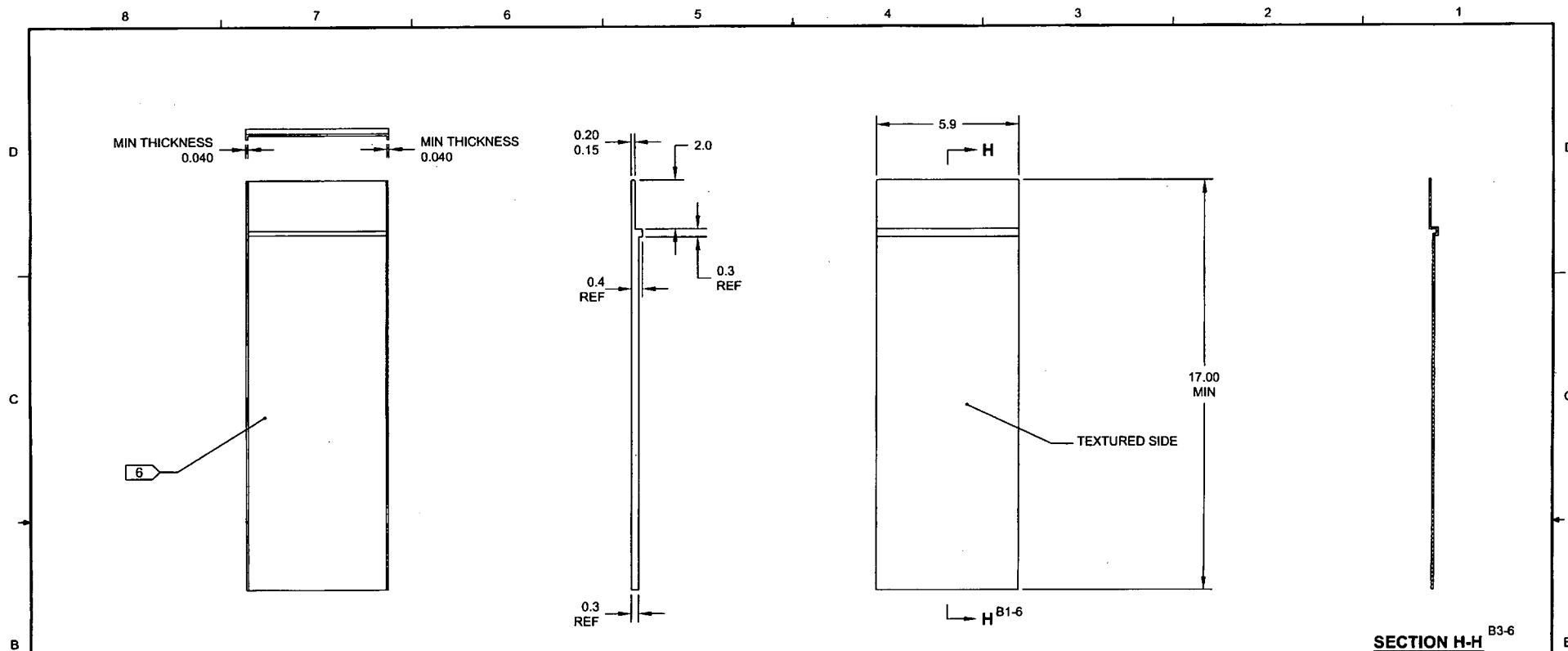
- 1) MATERIAL: SEE TABLE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N (SEE TABLE) USING VIBRATING STYLUS
- 7) WEIGHT: 0.12 lbs
- 8) TOOLING: THERMOFORM PER MOLD DT9078 PER DART QSI 022



PART NUMBER	DESCRIPTION
D3822-5KIV	KYDEX 6185, 0.080 THICK, P3-VELOUR MATTE, IVORY #62015 (MKYD6185S.080-P3-62015)
D3822-5KGY	KYDEX 6185, 0.080 THICK, P3-VELOUR MATTE, STEEL GRAY #52068 (MKYD6185S.080-P3-52068)

DESIGN		<b>DART AEROSPACE LTD</b>
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. REV. C
MFG. APPR.		D3822 SHEET 5 OF 6
APPROVED		TITLE SCALE
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**D3822-7 VERTICAL TUNNEL, LOWER**  
(BELL 206 A/B)

51981

RELEASED  
09/05/22

**NOTES:**

- 1) MATERIAL: SEE TABLE
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N (SEE TABLE) WITH VIBRATING STYLUS
- 7) WEIGHT: 0.36 lbs
- 8) TOOLING: THERMOFORM PER MOLD DT9396 PER DART QSI 022
- 9) MINIMUM THICKNESS: 0.060" UNLESS OTHERWISE NOTED



PART NUMBER	DESCRIPTION
D3822-7KIV	KYDEX 6185, 0.080 THICK, P3-VELOUR MATTE, IVORY #62015 (MKYD6185S.080-P3-62015)
D3822-7KGY	KYDEX 6185, 0.080 THICK, P3-VELOUR MATTE, STEEL GRAY #52068 (MKYD6185S.080-P3-52068)

DESIGN	PA	<b>DART AEROSPACE LTD</b>
DRAWN	PA	HAWKESBURY, ONTARIO, CANADA
CHECKED	PA	DRAWING NO. REV. C
MFG. APPR.	PA	D3822 SHEET 6 OF 6
APPROVED	PA	TITLE SCALE
DE APPR.	PA	VERTICAL TUNNEL (BELL 206 A/B) NTS
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